



PATENT SPECIFICATION

190,257

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PROVISIONAL SPECIFICATION.

An Improved Candle.

I, WYNDHAM THOMAS THORNE, of 245, Albany Road, Roath, Cardiff, a British subject, do hereby declare the nature of this invention to be as follows:—

I have discovered a material that will when combined with a candle, form a check on the wick of the candle when the wick of the candle is alight. When the wick & candle burns down to the material which I have placed sectionally in the candle from the external side of candle to the wick forming a disc around, and on the candle, the disc would be placed as required, in or on the candle so that the candle could be put out as required. The materials I am desirous to cover are, 1st, soaps of any kind, 2nd, flour, being mixed to a paste, French chalk or starch or plaster of paris, or cement, or any other substance capable of substituting my first application soap, and any kind of grown substance or made substance, minerals capable of being powdered, & not of an

inflammable nature; further I claim to have in my candle a safety application 25 when the candle's burning. Many a mother and others may forget the burning candle or possibly fall asleep with the possibility of serious dangers, sometimes resulting in fire, & loss of life. This I 30 claim to prevent through being master of the light, by means of my soap or other application, which forms part of the candle, coming in direct contact with the burning wick, with the ultimate result 35 that the flame is absolutely put out therefore preventing any possible dangers being incurred, through the above results of extinguishing the flame. I thus reduce the cost for candle light in the home, or 40 other places where they may be used, therefore I claim my candle to be an absolute necessity.

Dated this 21st day of September, 1921.

WYNDHAM THOMAS THORNE. 45

COMPLETE SPECIFICATION.

An Improved Candle.

I, WYNDHAM THOMAS THORNE, of 245, Albany Road, Roath, Cardiff, a British subject, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention relates to candles, such as are used for domestic and like purposes.

The invention has for its object to provide an improved safety candle principally intended for household use of the kind which is automatic in action in the sense that it is self-extinguishing.

It is known in the method of manufacturing self-extinguishing candles to attach to the wick hollow cones, or disks, or saucer shaped pieces of tin plate, or other suitable non-combustible substance called dividers and to support these

dividers in their positions by fine wire tied or twisted on the wick.

According to my invention the improved candle is composed or made of the usual candle formation substances or 70 materials—such as tallow or wax surrounding a wick centrally positioned—and provided, by incorporation therewith, at predetermined points in the length of the candle, with non-inflammable disks or 75 layers of disk-like formation formed of soap, flour mixed to a paste, French chalk, starch, cement, plaster of paris, fireclay, silica, asbestos, or any other suitable material or substance of a granular 80 or powdered nature, with a binding material if necessary, capable of forming sectionally arranged flame barriers of disk-like formation beyond which the flames cannot pass unless the non-inflam- 85

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inflammable barrier is removed by attrition. The socket end of the candle may also be provided with a base of non-inflammable material.

5 The accompanying drawings illustrate the invention.

In the drawings, Fig. 1 is a sectional elevation of a broken candle showing two flame barriers, but a candle may have one, 10 or more according to the number of sections it is desirable the candle should be divided into.

Fig. 2 is a plan of disk forming a non-inflammable barrier, by which the candle 15 is extinguished as soon as the combustion arrives at the barrier.

In carrying out the invention the candle *a* is moulded in the ordinary way by placing the disk *b* or disks or layers 20 constituted as aforesaid to form the flame barriers upon the wick *c* which is passed into the mould and surrounded by wax which is cooled in the known way, or when tallow is used the process of 25 "dipping" is employed.

The method of applying the disk when made of flour-paste and French chalk, silica, or granular or powdered materials to the candle is as follows: The flour and 30 French chalk are first mixed together with water into a paste, then sufficient of the paste to form a disk is placed into a small round disk mould, constructed in one or more parts or separate sections, after a 35 wick has been run through the centre of the mould, and this wick would be long enough say for the production of 12 candles, or as required; after the disks are set in disk moulds the wick and disks 40 attached to the wick are bodily removed and placed in a candle mould allowing say $\frac{1}{4}$ inch difference between the diameter of the disks and the mould, thus allowing a clearance between the disks 45 and the mould so that the paraffin wax can travel quite freely into the mould and produce a perfect candle, or holes can be arranged in the disks to allow for the passage of the material to form the candle. 50 The candles are preferably formed in a mould worked by hand and carried on a table.

The disks or layers *b* may be held in position on the wick during the candle 55 formation by quick drying adhesive applied to the wick under the central hole of the disk or layer, or by small pins inserted transversely in the wick immediately under the disks or layers, or by 60 frictional contact between the central hole of the disks and the wick.

In order to facilitate the threading of the disks upon the wick *c* before placing

the wick in or when in the mould, they can be provided with a semi-diametral slit to pass them on to the wick, and the central hole of the disk may be slightly less than the thickness of the wick, so that the disks bind upon the wick and are thereby held at the required position.

The disks or flame barriers can also be arranged to be placed in position after each section of candle has been formed to the wick by allowing for the disks to be deposited in vacant sections or open spaces between the sections of the candle and then adding a second coating or covering of wax if necessary to the full length of the candle for the purpose of combining the wax and disks together.

The wick may also be employed in sections so that the full length of the candle consists of sections each of a definite length of wick and these sections of candle may be joined together to form a full candle.

d is a plug of suitable material shown in dotted lines forming a non-inflammable base portion. When a candle has burnt to the point at which a disk or flame barrier is positioned, the flame is extinguished automatically.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A candle having a disk, or disks or layers formed of soap, flour mixed to paste, French chalk, starch, fireclay, silica, asbestos, or other substance of granular or powdered nature with a binding material if necessary, arranged to form flame barriers in the candle.

2. In a candle according to Claim 1 disks or layers forming flame barrier having semi-diametral slits to facilitate their being passed on to the wick.

3. In a candle according to Claims 1 or 2, disks or layers forming flame barrier placed in position, after each section of candle has been formed to the wick, by allowing for the disks or layers to be deposited in vacant sections or open spaces between the sections of the candle then adding a further coating or covering of wax for the purpose of combining the wax and disk or layers together.

4. In a candle according to the previous claims, the use of sectional wicks.

5. Self-extinguishing candles, substantially as set forth and as illustrated by the accompanying drawings.

Dated this 3rd day of November, 1921

WYNDHAM THOMAS THORNE.

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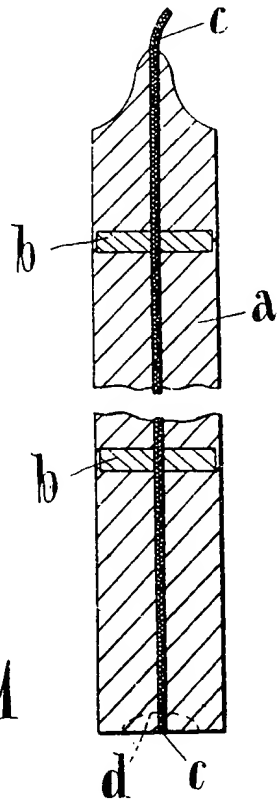


Fig. 1

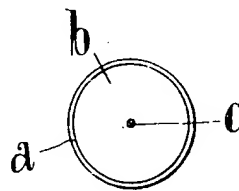


Fig. 2